WHAT IS CLAIMED IS:

1. A display device, comprising:

a light source for emitting illumination light;

a display element having a plurality of pixels for modulating the illumination light;

an irradiation optical system for irradiating the illumination light emitted from the light source onto some of the pixels; and

an illumination light scanning means for scanning the illumination light irradiated by the irradiation optical system,

wherein the irradiation optical system comprises image forming means for condensing the illumination light emitted by the light source to form an image and image re-forming means for forming the image formed by the image forming means on the display element, and

wherein the illumination light irradiated onto the display element is irradiated onto the display element by at least the image forming means and the image re-forming means.

2. The display device according to Claim 1,

wherein the illumination light scanning means comprises a rotating prism for changing the refracting angle of the illumination light by the rotation thereof, thereby scanning the illumination light, and

wherein the position of an image formed by the image forming means is positioned inside or around the rotating prism.

3. A projector, comprising:

the display device according to Claim 1;

a projecting means for projecting an image of the display element.

4. The projector according to Claim 3,

wherein the illumination light is divided into two or more colored light components after passing through the illumination light scanning means, and

wherein the image re-forming means is arranged in each colored light component and forms the image formed by the image forming means on the display element corresponding to each colored light component.

5. The projector according to Claim 3,

wherein the illumination light emitted from the light source is divided into two or more colored light components,

wherein the image re-forming means and the illumination light scanning means are arranged in each colored light component,

wherein the image re-forming means forms the image formed by the image forming means on the display element corresponding to each colored light component, and

wherein the illumination light scanning means scans the illumination light divided into respective colored light components so that the projected positions of the images formed by the image re-forming means are almost the same when the images of the display elements corresponding to the respective colored light components are projected so as to be overlapped.

6. The projector according to Claim 3,

wherein the illumination light emitted from the light source is divided into two or more colored light components,

wherein the image re-forming means and the illumination light scanning means are arranged in each colored light component,

wherein at least one component of the colored light is divided into two or more colored light components after passing through the illumination light scanning means,

wherein the image re-forming means forms the image formed by the image forming means on the display element corresponding to each colored light component, and

wherein the illumination light scanning means scans the illumination light divided into respective colored light components so that the projected positions of the images formed by the image re-forming means are almost the same when the images of the display elements corresponding to the respective colored light components are projected so as to be overlapped.

7. The projector according to Claim 4,

wherein the distances from the light source to the display elements corresponding to the respective colored light components are almost the same for each colored light component.

8. The projector according to Claim 5,

wherein the distances from the light source to the positions of the images of the respective colored light components formed by the image forming means are almost the same for each colored light component.

9. The projector according to Claim 5,

wherein the distances from the positions of the images of the respective colored light components, which are formed by the image forming means, to the display

elements corresponding to the respective colored light components are almost the same for each colored light component.